

Notice of Allowability

Application No.

10/720,372

Examiner

Jerry T Rahll

Applicant(s)

GHIRON ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-46.
3. ☒ The drawings filed on 11 May 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

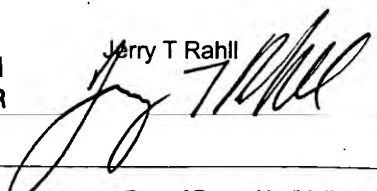
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2/26/04
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other ____


AKM ENAYET ULLAH
PRIMARY EXAMINER


Jerry T Rahll

Examiner's Statement of Reasons for Allowance

Drawings

1. The drawings submitted on 11 May 2004 have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 26 February 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner (note attached form PTO-1449).

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Claims 1-46 are allowed. Claims 1-46 describe an optical coupling arrangement having a silicon waveguide formed in a surface layer of a SOI wafer, a prism coupler attached to the SOI wafer such that a first surface of the prism coupler is parallel and mated to a flat surface of the SOI wafer, and where the refractive index of the prism coupler is equal to or greater than that of the waveguide, optical elements to collimate, shape and steer an optical input beam, an evanescent coupling region between the prism coupler and the waveguide and output elements in the path of the beam that emerges from the output surface of the prism coupler to shape, collimate or steer the optical beam.

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5. U.S. Patent No. 3,586,872 to Tien describes an optical coupling arrangement having a waveguide formed in a surface layer of a wafer, a prism coupler attached to the wafer such that a first surface of the prism coupler is parallel and mated to a flat surface of the wafer, optical elements to collimate, shape and steer an optical input beam and an evanescent coupling region between the prism coupler and the waveguide. Tien does not describe the waveguide as a silicon waveguide formed on the surface layer of an SOI wafer. Further, Tien does not describe the refractive index of the prism coupler is equal to or greater than that of the waveguide. Further, Tien does not describe output elements in the path of the beam that emerges from the output surface of the prism coupler to shape, collimate or steer the optical beam.

6. U.S. Patent No. 3,586,872 to Tien remains the closest prior art of record in this application. For the reasons stated above, however, Claims 1-46 herein are deemed to patentably distinguish over Tien and all other prior art of record.

Conclusion

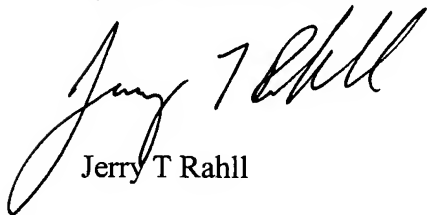
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents Nos. 4,152,045, 4,832,428, 6,219,475 and 6,526,187 describe optical coupling arrangements having waveguides and prism couplers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T Rahll whose telephone number is (571) 272-2356. The examiner can normally be reached on M-F (8:00-5:30), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry T Rahll



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PRIMARY EXAMINER